WHAT IS CLAIMED IS:

1. A light curtain generating device, comprising a light emitting pillar assembly accommodating an array of light emitting units within a pillar case and a light receiving pillar assembly accommodating an array of light receiving units within a pillar case, the light emitting pillar assembly and light receiving pillar assembly being placed opposite to each other so as to form a light curtain for detecting an object between the pillar assemblies, characterized in that:

the light emitting unit array and light receiving unit array accommodated in the respective pillar cases each comprise a group of single-beam optical modules.

2. A light curtain generating device according to claim 1, wherein each opposing pair of a light emitting unit and a light receiving unit perform a detecting action in a prescribed order.

3. A light curtain generating device according to claim 1, wherein each single-beam optical module consists of a light emitting unit or a light receiving unit comprising a lens, an optical element and a holder integrally incorporated with them so as to align them with a prescribed optical axial line.

4. A light curtain generating device according to claim 3, wherein the holder is made of plastic material.

5. A light curtain generating device according to claim 4, wherein the lens and optical element are jointed to the plastic holder by snap fit arrangements.

6. A light curtain generating device according to claim 1, wherein each group of single-beam optical modules comprises an optical module block including a plurality of single-beam optical modules arranged in a single row by being attached to a metallic plate having a prescribed length.

7. A light curtain generating device according to claim 6, wherein each single-beam optical module forming the optical module block is attached to the metallic plate at a side of the single-beam optical module extending in parallel with the optical axial line.

8. A light curtain generating device according to claim 7, wherein each single-beam optical module forming the optical module block is attached to the metallic plate by a snap fit arrangement.

9. A light curtain generating device according to claim 3, further comprising a circuit board having a plurality of optical element mountable positions, and signal processing means for electrically and selectively disabling the optical element mountable positions.

10. A light curtain generating device according to claim 1, wherein each pillar assembly comprises a base frame defining mounting positions for single-beam optical modules, and a plurality of single-beam optical modules mounted in the mounting positions of the base frame.

11. A light curtain generating device according to claim 10, wherein the base frame consists of a metallic plate member.

12. A light curtain generating device according to claim 10, wherein at least one of the mounting positions is devoid of a single-beam optical module.

13. A light curtain generating device according to claim 1, wherein each pillar assembly comprises at least two base frames arranged in series along a length of the pillar assembly each defining mounting positions for single-beam optical modules, and a plurality of single-beam optical modules mounted in the mounting positions of the base frames.

14. A light curtain generating device according to claim 13, wherein the mounting positions of the two base frames have different pitches.

15. A light curtain generating device according to claim 14, wherein the two base frames have different numbers of mounting positions.

16. A light curtain generating device according to claim 14, wherein the two base frames have different lengths.

17. A light curtain generating device according to claim 14, wherein the base frames consist of metallic plate members.